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Observations on the Viability of Newcastle Disease Virus

By

F. D. ASPLIN

MINISTRY OF AGRICULTURE AND FISHERIES, WEYBRIDGE

Prior to 1947 two outbreaks of severe Newcastle disease were identified in England. In neither outbreak was the origin of infection definitely ascertained. The first outbreak recognised by Doyle (1927), on a farm near Newcastle-upon-Tyne, was believed to have been introduced as a result of feeding uncooked swill collected in Newcastle.

The second outbreak was confined to a single large farm in Hertfordshire in 1933 (Dobson, 1937). The source of infection of this outbreak could not be determined.

Newcastle disease reappeared in England in February, 1947, in a severe form. Gordon, Reid & Asplin (1948) reported that in 33 per cent. of the first 540 outbreaks of this epizootic, there was a history of infected poultry having access to swill or butchers' offal. It was suggested that Newcastle disease virus was imported in a consignment of uneviscerated poultry carcases from Hungary. Whilst the virus was not isolated from imported carcases at that time, a strain of virus was isolated in January, 1948, from the skin of eviscerated frozen Hungarian poultry. The observation that feeding uncooked swill was frequently followed by outbreaks of Newcastle disease prompted a study of the duration of infectivity of carcases of Newcastle disease-infected fowls.

SURVIVAL OF NEWCASTLE DISEASE VIRUS IN INFECTED POULTRY CARCASES

Eight cockerels were inoculated intramuscularly with Hertfordshire 1933 strain of Newcastle disease virus. Four days later when symptoms had appeared the fowls were killed. Four were plucked, eviscerated and wrapped in paper. The remaining four were wrapped in paper unplucked. Two of each group were stored in a cold store at about 34° to 35° F. The remaining four chickens were stored at −4° F. At intervals samples of bone marrow and skin scraping were removed, suspended in broth and tested for infectivity by inoculation into fowls or inoculation of filtrates into embryonated eggs. The duration of infectivity of the tissues is shown in Table I.

TABLE I: SURVIVAL OF NEWCASTLE DISEASE VIRUS IN STORED INFECTED CARCASE

Treatment of carcase	Storage temperature	Tissue	Duration of infectivity
Plucked and eviscerated ..	34–35° F.	Skin	98 days
" " ..	34–35° F.	Bone marrow	134 "
Unplucked	34–35° F.	Skin	161 "
"	34–35° F.	Bone marrow	196 "
Plucked and eviscerated ..	−4° F.	Skin	more than 300 days
" " ..	−4° F.	Bone marrow	
Unplucked	−4° F.	Skin	
"	−4° F.	Bone marrow	

Dressed carcases stored at 34° to 35° F. were the first to show evidence of decomposition; by the 28th day the carcases were discoloured and by the 42nd day the skin was somewhat moist and easily abraded. Moulds were growing on the areas which had been scraped earlier. Dressed carcases became almost completely covered by moulds and desiccated by the 98th day when both skin and bone marrow were still infective. Unplucked carcases stored at the same temperature deteriorated somewhat more slowly but were mummified before the skin was non-infective. Both dressed and unplucked carcases stored at −4° F. were in good condition when they were finally tested after 300 days storage, but both bone marrow and skin were still infective.

VIABILITY OF NEWCASTLE DISEASE VIRUS UNDER LABORATORY CONDITIONS

A number of tests were made in order to determine the approximate time during which Newcastle disease virus would survive in the absence of contaminating organisms or disinfectants.

The virus suspension employed in these experiments was undiluted amnio-allantoic fluid of embryos dead of Newcastle disease.

After exposure of the virus to the test conditions viability was determined by inoculation of chick embryos. The results are shown in Table II.

TABLE II: SURVIVAL OF NEWCASTLE DISEASE VIRUS UNDER LABORATORY CONDITIONS

Treatment of virus	Result
Exposed on filter paper to dry heat at 98° F.	Active after 6 hours. Inactive after 12 hours
Exposed on egg shell to dry heat at 98° F.	Active after 24 hours. Inactive after 44 hours
Exposed on hessian in sterile faeces to dry heat at 98° F.	Active after 72 hours. Inactive after 90 hours
Fluid virus suspension in water bath at 133° F. (56° C.)	Active after 45 min. Inactive after 60 min.
Exposed on filter paper stored at:—	
(*a*) 34°–35° F.	Active after 273 days. Inactive after 217 days
(*b*) 32° F.	" 161 " " 175 "
Dried on glass, stored at:—	
(*a*) 34°–35° F.; (*b*) 32° F. ..	Still active after 396 days

Egg propagated virus exposed on egg shell or filter paper became inactive quite quickly at 98° F. When the virus was mixed in sterile excreta it was more resistant to heat at this temperature. Fluid virus suspensions uncontaminated with bacteria have remained infective for as long as three weeks at 98° F. and for more than two years at 34° F. Virus dried on glass and stored in unevacuated tubes at refrigerator temperature survived significantly longer than virus on filter paper stored in the same manner.

INACTIVATION OF NEWCASTLE DISEASE VIRUS BY DISINFECTANTS

A number of experiments were made to test the effectiveness of various disinfectants against Newcastle disease virus. The virus suspension employed was undiluted amnio-allantoic fluid of infected embryos. The infective titre of this suspension for embryos was determined before the virus was exposed to the action of the disinfectant. After allowing the disinfectant to act on the virus for a period at room temperature (time and temperature indicated in Table III) the infectivity of the virus was titrated in embryos. After one hour at room temperature the virus-disinfectant mixtures were stored in the refrigerator and again titrated for infectivity. The results are shown in Table III.

TABLE III: ACTION OF VARIOUS DISINFECTANTS ON NEWCASTLE DISEASE VIRUS

Disinfectant	Final concentration of disinfectant per cent.	Time of exposure	Temperature* ° F.	M.L.D. per 1 ml. of N.D.V. exposed to disinfectant	M.L.D. per 1 ml. of N.D.V. surviving exposure
Sodium carbonate ..	4·0	1 hour	76	10^8	10^8
" " ..	4·0	24 hours	76	10^8	10^8
" " ..	4·0	7 days	76	10^8	10^8
Lysol	2·5	1 minute	69	10^8	0
"	1·0	1 hour	75	10^8	0
"	0·1	1 "	75	10^8	10^8
"	0·1	24 hours	75	10^8	10^8
Phenol	2·5	1 hour	68	10^7	10^8
"	2·5	24 hours	68	10^7	0
"	0·5	24 "	68	10^7	$>10^8$

> = Greater than.

* Virus-disinfectant mixture kept at temperature indicated for 1 hour, thereafter stored at refrigerator temperature.

Disinfectant	Final concentration of disinfectant per cent.	Time of exposure	Temperature* °F.	M.L.D. per 1 ml. of N.D.V. exposed to disinfectant	M.L.D. per 1 ml. of N.D.V. surviving exposure
Proprietary hypochlorite disinfectant	5·0†	1 hour	73	10^7	$>10^2$
" "	5·0	3 hours	68	10^6	0
" "	1·0	1 hour	68	10^6	10^6
" "	1·0	24 hours	68	10^6	10^5
Pot. permanganate..	0·4	1 hour	60	10^7	0
" " ..	0·2	1 "	60	10^7	$>10^2$
Proprietary permanganate disinfectant	4·0†	1 hour	65	10^5	$>10^5$
" "	4·0	24 hours	65	10^5	10^2
" "	1·0	24 "	65	10^5	$>10^4$
Commercial coal-tar disinfectant I ..	2·5	1 minute	60	10^2	0
" "	1·25†	1 hour	75	10^7	10^2
" "	0·5	1 "	75	10^7	10^2
" "	0·5	24 hours	75	10^7	0
Commercial coal-tar disinfectant II ..	2†	1 hour	67	10^5	10^2
" "	2·0	24 hours	67	10^5	10^2
" "	1·0	1 hour	67	10^5	10^2
" "	1·0	24 hours	67	10^5	10^2

> Greater than.
* Virus-disinfectant mixture kept at temperature indicated for 1 hour, thereafter stored at refrigerator temperature.
† Concentration of disinfectant recommended by the manufacturer for disinfection of grossly contaminated material.

The speed of inactivation of N.D.V. by formalin was found to be influenced to a very marked extent by variations in temperature and concentration. The result of tests in which commercial formalin was added to undiluted virus suspensions are shown in Table IV.

TABLE IV: ACTION OF FORMALIN ON NEWCASTLE DISEASE VIRUS

Concentration of formalin. Per cent.	Time of exposure	Temperature. °F.	Result
0·2	10 days	34–35	Inactive
0·1	16 "	34–35	"
0·05	50 "	34–35	"
0·025	90 "	34–35	"
2·0	1 hour	65	Active
2·0	12 hours	65	Inactive
1·0	12 "	65	"
0·25	1 hour	98	"
0·1	1 "	98	Active
0·1	6 hours	98	Inactive

A Newcastle disease virus suspension remained active after exposure to 2 per cent. commercial formalin for one hour at 65° F. Virus exposed to 1 per cent. formalin was inactivated within 12 hours at the same temperature. Lower concentrations, 0·2 to 0·025 per cent. of formalin at refrigerator temperature, took 10 to 90 days to inactivate the virus, whereas virus exposed to 0·1 per cent. formalin at 98° F. was inactivated within six hours.

The results confirm the findings of Tilley & Anderson (1947) and Cunningham (1948) who found that sodium hydroxide 2 per cent., sodium orthophenylphenate 1·0 per cent., lysol 1 per cent., and two quaternary ammonium compounds 0·1 per cent., effectively inactivated Newcastle disease virus. Formalin, 4 per cent. solution at 78° F., failed to inactivate the virus after 30 minutes but was effective in 60 minutes. Sodium carbonate, 4 per cent., was ineffective.

The results of the present report indicate that warm dry conditions might be employed to ensure disinfection of incubator and brooder equipment, sacks, chick boxes, etc. The experiments in which virus was exposed at incubator temperature suggest that virus contaminating the shells of eggs is unlikely to survive long enough to infect chicks at hatching, even if no formalin fumigation is carried out.

Whilst the direct disinfectant effect of sodium carbonate on the virus was disappointing, the excellent detergent action of this substance is of great value. In practice the use of a hot 4 per cent. solution of soda for cleaning and disinfection has proved satisfactory.

PERSISTENCE OF NEWCASTLE DISEASE VIRUS ON INFECTED PREMISES

In those countries in which the disease is endemic, fowls and turkeys probably serve as the usual reservoirs of infection. Most survivors of outbreaks appear to be non-infective but the evidence indicates that some recovered fowls and turkeys may remain carriers. Where slaughter of all poultry on infected premises is adopted, residual infection is limited to persistence of virus in houses, on equipment or on land, etc., and possibly to infection of wild birds or other animals. Dobson (1939) recorded that chicks became infected when placed in battery brooders seven weeks after the slaughter of an infected group in August, 1933. In this case it was observed that cleansing of the brooders had been inefficiently carried out.

In outbreaks dealt with under the Fowl Pest Order of 1936 restrictions are normally removed and restocking permitted six weeks after the slaughter or four weeks after disinfection, whichever is the earlier. In special circumstances where thorough disinfection is not practicable, the freedom date may be delayed. Although more than 2,480 outbreaks were confirmed between February, 1947, and November, 1948, no outbreaks were attributable to residual virus infection following restocking. However, the experience in the 1933 outbreak (Dobson, 1939), the tenacity of the virus at low temperatures and its resistance to disinfectants indicate the importance of efficient cleansing and disinfection, particularly during cold weather.

The origin of infection in 10 per cent. of the first 542 outbreaks of the present epidemic was obscure (Gordon, Reid & Asplin, 1948). Whilst many species of wild birds are known to be susceptible to inoculation with Newcastle disease virus, no direct evidence of the disease in wild birds in Britain has been obtained, but it is probable that some of these outbreaks resulted from the movement of wild birds from infected premises.

Since both rats and pigs may sometimes have access to uncooked swill or to carcases of infected chickens, it was decided to ascertain if these animals could be responsible for transmitting the disease to chickens.

Two pigs were inoculated intramuscularly with 2·5 ml. of undiluted amnio-allantoic fluid of Newcastle disease-infected embryos. No symptoms were seen. The haemagglutination inhibition value of the sera of both pigs showed a slight but insignificant rise for Newcastle disease. Samples of urine and faeces were collected daily and tested for infectivity by injection into susceptible fowls or embryonated eggs. Virus was demonstrated in the urine of one pig up to 48 hours after inoculation but not later.

Two rats were inoculated intramuscularly with 10,000 embryo lethal doses of Newcastle disease virus and two were dosed by mouth with the same amount. No symptoms were noted in any of the rats. The haemagglutination-inhibition titres of the sera of all four rats rose slightly.

Filtrates of the faeces of the rats which had received virus by mouth contained Newcastle disease virus 24 hours after dosing but not later. Both urine and faeces of the rats injected with virus were non-infective when tested 24 hours after dosing.

These experiments suggest that both rats and pigs feeding on infective offal may, for a short period, carry the virus and may be responsible for setting up the disease in fowls.

Summary

A strain of Newcastle disease virus was obtained from the skin of frozen eviscerated imported poultry.

Newcastle disease virus survived on the skin of experimentally infected eviscerated carcases stored at 34° to 35° F. for 96 days and in the bone marrow for 134 days. In unplucked carcases, stored at the same temperature, virus persisted on the skin for 160 days and in the bone marrow for 196 days.

Virus persisted on the skin and in the bone marrow of both eviscerated and unplucked carcases stored at −4° F. for longer than 300 days.

Virus on filter paper exposed to dry conditions at incubator temperature, 98° F., was inactive after 12 hours; virus on egg shell at the same temperature was inactive after 44 hours. Sterile faeces exerted a protective effect on the virus at the same temperature. Virus on paper or glass, stored at refrigerator temperatures, remained active for many months.

Certain disinfectants were tested against Newcastle disease virus: lysol 1 to 2·5 per cent., and formalin under warm conditions were most effective.

A pig inoculated intramuscularly excreted virus for 48 hours and two rats dosed by mouth excreted virus in the faeces for 24 hours.

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Meat and Food Inspection Service

By

DAVID E. ORR, M.R.C.V.S.

Chief Veterinary Inspector, Manchester

The article on Meat Hygiene, by Dr. Ginsberg and Professor Robertson, in your issue of January 8th, 1949, draws attention to the weakness of our present position. In addition to any steps which the colleges may decide to take in the matter, there is an immediate problem which calls for attention and solution. It is not enough to make comparison with conditions in other countries and "wish" their fulfilment here. What is wanted is a practical plan which will improve the meat and food inspection services, so that they can be employed to the better protection of the public on the one hand and the practical advantage of the industry on the other. To do this requires a clear conception of the meat and food industry of this country as we know it exists to-day, with all its ramifications, together with its probable trend of development—then it may be possible to organise our inspection services on rational lines. As a preliminary step a brief review of the meat industry in this country will probably help us to measure our problem.

Before the war, this industry, including fat stock marketing, was loosely built up on a basis of free enterprise. During the war, some measure of control and co-ordination was imposed on the industry as a whole; now the question which is concerning many is, what will be the next step? Will the industry return to its pre-war status, or will we have a continuation of the existing arrangement with suitable adjustments for administrative efficiency, or something between the two? Until we know the answer to these questions it will be impossible to state precisely the sphere and function of the meat inspection service in relation to the industry, and the part which veterinary surgeons are likely to play in that service. Post-war plans are now being formulated and discussed by all sections of the industry—livestock, wholesale marketing, and retail distribution. It is proper, therefore, that we should consider our position in order to prepare for any eventualities.

Without attempting to forecast the future, I would suggest that the peculiar genius of the British people for compromise will lead to the development of the meat industry on the basis of the pre-war status, that is to say, the industry will eventually be returned to its former owners, conditional on certain reforms being carried out which will ensure that the interests of the public are properly safeguarded.

The first step in any reformed industry is likely to be greater centralisation of slaughtering, with the gradual elimination of the private slaughterhouse. The completion of this step may well take five to ten years, starting now, because it will mean the rebuilding of many of our existing large abattoirs and/or the construction of many more new ones. The siting, the size and the lay-out of these new premises are matters to be determined, and these factors alone offer a wide field of discussion and argument in which we, as a profession, are entitled to be heard. The size and capacity of these centralised establishments will determine the number required throughout the country.

It is well to remember, at this stage, that something in the region of 30 per cent. of our meat supplies will continue to be imported, and, if these centralised establishments continue to serve as wholesale distributing points, then suitable accommodation will be necessary for this class of meat. When this primary point is settled, the organisation of fat stock marketing can be considered, and this begs the question, will the future "set-up" of the live-stock side of the meat industry be a free market or a collecting centre for grading? Until these two major matters are satisfactorily resolved, the organisation of the meat industry on rational lines cannot be contemplated. At this stage, many questions crowd into mind—who will control and manage these new undertakings, elected members of local authorities or regional authorities or public companies?

Let us consider, for a moment, the complex character of the work and the diversity of the provisions which would require to be made:—

Livestock collection or marketing and lairage.
Slaughter and dressing of animals.
Collection and disposal of by-products—pharmaceutical, edible, inedible.
Provision for inspection.
Refrigeration of carcases.
Allocation and distribution of the dressed meat to the shops, with suitable transport.
Collection and disposal of slaughterhouse refuse, and cleansing.
General maintenance of the premises (requiring painters, plumbers, joiners, electricians, engineers, and paviors, together with general labourers).
Welfare arrangements—lavatories, drying rooms or laundries, canteens and recreational facilities.
Staff control and management.
Accountancy.

Against such a background the role of the meat inspector, as we know it to-day, is relatively small, though highly important.

The point which seems to concern many of us is whether society is getting the maximum value out of the meat inspector or the meat inspection service; whether, with his highly specialised knowledge, the meat inspector could not be employed in a wider field than he is at present. Before attempting to answer that question, let us look at the existing arrangements for meat inspection, see where they fit into the present organisation, and examine how this meat inspection service could be improved; then probably we will be able to indicate how far, and in what respects, a meat inspection service could be employed in the wider field of administering the reorganised meat industry.

The meat inspection service of this country is at present unorganised, it consists of a number of various-sized, detached units, employed by an equal number of local authorities. Individually, the inspector is zealous in performance of his duties but remains, inevitably, a detached unit, and a series of units lacking co-ordination are, as would be expected, lacking in effectiveness. The power of the individual inspector is derived from various legal enactments—the Food and Drugs Act, 1938, together with the Meat Regulations, 1924, certain local by-laws, and some inspectors have powers under the Diseases of Animals Acts and Orders. Central administration of these legal enactments rests with three Government departments, the Ministry of Health, the Ministry of Food, and the Ministry of Agriculture, and the local administration rests with the local authority who pays the inspector's salary.

The fundamental weakness in the present arrangement is the divided central administration—until that is corrected and the meat inspection brought under one (central) Government department from whom it will derive its power, and to whom it will look for guidance and direction, little progress, either scientific or administrative, is possible.

So far as meat inspection is concerned, all the legal powers were originally vested in the Ministry of Health and delegated to the several local authorities, but the Ministry were so little concerned with their responsibilities that for the last 25 years they have taken no interest in the scientific development of meat inspection, and within the last two years have surrendered many of their powers to the Ministry of Food. This surrender surely implies and admits that the Ministry of Health have no interest in meat inspection or, alternatively, have other and more important work to do. But the surrender of power over meat inspection to the Ministry of Food is surely ill-advised as it makes them judge in their own cause. As a trading department the Ministry of Food is naturally more concerned with the larger issues of buying and selling; consequently, their attitude to meat and food inspection cannot be impartial.

The obvious choice to administer a meat and food inspection service is the Ministry of Agriculture. Through its several divisions this Ministry is concerned in an advisory capacity with the production of foodstuffs, and naturally will be concerned with the results of their work. Where are they likely to get a better insight into the results from their efforts in the field than through an inspection service? It is scarcely necessary for me to point the obvious advantages to the Animal Health Division of an efficient meat inspection service operating in large abattoirs. Further, the value of such facilities in disease control, research and education is too clearly apparent to require emphasis from me. With power centralised in the Ministry of Agriculture the way would be clear for the co-ordination of the various inspection units distributed throughout the country.

At present, meat and food inspectors derive their status from the local authority which employs them, but for how long can this position be sustained in view of the fact that even now, inspectors at large abattoirs are inspecting not only for their own districts but for surrounding districts and other local authorities? The tendency in this connection can only increase, as time goes on, when more and more centralised abattoirs come into use. The inspector has ceased, or is ceasing, to be a local inspector; he has become a regional officer. One is bound to consider, in these circumstances, how long one local authority will sustain the burden of inspection for its neighbours, or is it right that it should do so?

What applies in meat inspection is taking place in connection with other foods. The tendency to centralisation is placing the burden of inspection on the local inspector in whose district the organisation is located.

So far, my argument seems to have reached a point where the choice lies between:—

(*a*) a local inspectorate under unified central administration, or
(*b*) a national inspectorate with regional autonomy.

It should be noted that within recent years a significant change has been taking place in the relationship which exists between the inspector and the trader. In the first instance, the inspector was appointed as a public watch-dog, the unscrupulous trader was his quarry. Gradually he came to be accepted by the trader as a necessary evil. Later, and particularly since the war, the inspector's place in the industry has become recognised as essential. He has become a technical adviser to the industry, retaining his role of watchdog for the public. How far can this new feature be developed? Are the dual roles compatible?

So far we have only considered or reached the stage where a properly co-ordinated meat inspection service could operate within the framework of the meat industry, etc., doing the routine inspection of animals and foodstuffs to ensure that diseased and unsound foodstuffs are withdrawn from circulation. We should keep clearly in mind that a period of transition, extending over many years, will require to be covered before the full service could work effectively.

At this point we could well consider how these diseased and unsound foodstuffs should be handled to ensure the maximum economic value. Here is a field in which the meat inspection service should have a say, if not a controlling voice. The conversion of these harmful products is a highly skilled and technical matter, and may well develop into a sideline of considerable dimensions which would require, in its organisation, research facilities and a distributive or selling agency.

There is one stage in the general assembly line (from farm to shop) where the meat inspection service should definitely have a controlling voice, that is, in the passage of animals through the slaughterhouse, to ensure that a high standard of hygiene is observed in the handling of the dressed carcases. The contamination of carcases at this stage is probably one of the worst features of the present-day arrangements.

How far the meat inspection service should interfere in the distribution of the product beyond the point of ensuring that it shall be handled with proper regard to hygiene, may well be left to a later stage in development.

The handling of the live animals in the market or collecting centre is another stage where the veterinary inspector attached to the meat inspection service is intimately concerned, and may well exercise control, but whether it will be necessary or desirable for him to play any part in the actual transfer of the animals from the producer (farmer) to the processor (butcher), by grading or otherwise, could also be left to a later stage.

So far, our enquiry has outlined a fairly considerable field in which our relatively small numbers could play a useful part, leaving the very much larger field of buying and selling and financial control, together with the utilisation of the by-products, to those better suited for the purpose.

Let us remember that while we have a strong title to control such parts of the industry as concern the diseased animal, the hygiene of premises and products and the control of condemned foodstuffs, etc., that can only represent something like 20 per cent. to 30 per cent. of the total; the remaining 70 per cent. to 80 per cent. touches us only remotely. Any claim on our side to the control of the industry as a whole only invites a rebuff.

A Unified Meat and Food Inspection Service

We should acknowledge our limited sphere and adopt, as an immediate objective, the formation of a unified meat and food inspection service. To implement this action would require something more than the adoption of a resolution. Certain complicated statutory changes would be necessary to transfer existing powers. Having adopted such an objective we are then faced with the exceedingly thorny question of staffing the service.

In the first instance, staffing would be achieved by taking over all persons engaged in the work at any agreed date; the thorns would appear when an effort is made to weld them into working teams and, in particular, difficulties would arise in the matter of recruiting new entrants into the service.

Let us examine this problem squarely and openly, because there is no denying the fact that much of the feeling aroused is due to the habit of referring to such staff matters as if we had an unquestioned title in this connection to the exclusion of all others. It should be noted, however, that we, as a body, are not alone in this attitude.

It would be interesting to know the exact numbers in each of the following categories engaged now in meat and food inspection throughout the country:—

Medical officers (apart from administrative responsibility) engaged part-time.
Veterinary surgeons—engaged whole-time.
Veterinary surgeons—engaged part-time.
Sanitary inspectors (who hold a certificate for the inspection of meat and other foods) engaged whole-time.
Sanitary inspectors (who hold a certificate for the inspection of meat and other foods) engaged part-time.
Detention officers, with or without qualification.

Such figures would aid materially in helping to focus the question of the actual numbers which would be necessary for effectively carrying out the work:—

1. During the transition stage.
2. When the meat industry is centralised.

Most large abattoirs or centralised slaughterhouses in this country have mixed staffs consisting of veterinary inspectors and meat and food inspectors in a proportion of approximately one to four. Some authorities like their whole-time meat and food inspectors to graduate through the meat trade. Other authorities are satisfied if their sanitary inspectors have achieved their additional qualification in meat and food inspection, irrespective of their background. Experience has shown that this type of mixed team works very well; coming to the work from different sources each makes a contribution to the service which is to the mutual and general advantage.

One thing, I think, we must make clear from the outset, and it applies equally to the veterinary inspectors as to the meat and food inspectors, and that is, that meat and food inspection is a whole-time job and that the individual will be employed wholly on such work or work of a closely associated character such as disease control, research, education, etc.

I would draw attention to an earlier stage in my remarks where I refer to the various divisions of the Ministry of Agriculture and Fisheries and, in a general way, refer also to the inspection of foods other than meat—the association is obvious without further comment.

With such a settled policy I feel there would be little difficulty in attracting new recruits to the service through the existing channels, because inside such a service there would be unlimited scope for advancement to those qualifying themselves by merit.

In conclusion I would like to emphasise these points:—

1. That however admirable the meat and food inspection service in Germany or elsewhere may be, it would be unwise to try and fasten it on to the industry of this country unless the structure of the industry in the two countries is comparable; the problem should be examined in that light.
2. That the establishment of a wholly effective service would not be possible in the present fluid state of the industry of this country.
3. That although a long period of transition will exist before an efficient service can be operated, that should not constitute any reason for delay in trying to co-ordinate the existing arrangements.

AGRICULTURAL RESEARCH COUNCIL SECRETARY

With the approval of the Lord President of the Council, and after consultation with the President of the Royal Society, the Agricultural Research Council have appointed Dr. W. K. Slater, D.Sc., F.I.C., to be their Secretary, in succession to the late Sir John Fryer, as from May 1st.

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INVESTMENT IN AGRICULTURE

The Minister of Agriculture, Mr. Williams, speaking at the annual dinner of the Royal Institution of Chartered Surveyors at Grosvenor House, said that in the capital investment programme in the next four years the Government had allocated £400,000,000 to £450,000,000 to agriculture.

A little more than half related to machinery and movable equipment, and the remainder to farm buildings, roads, water supplies, and other fixed equipment. The programme was to increase production over pre-war by 50 per cent.

* * * * *

Weekly Wisdom

Apart from convention, the moral distinction between bullet and bacillus is by no means obvious: one may be more effective than the other, but their use seems equally justifiable or unjustifiable. The fact remains that to many doctors bacterial warfare is particularly repugnant for two reasons: it enlists against a human enemy the micro-organisms which are the foes of all mankind, and it diverts to destructive purposes knowledge which the profession has laboriously acquired in the hope of making people, of all nations, healthier and happier. We have reached a situation in which men of the highest character are prepared from a sense of duty, to contemplate what they would normally regard as crimes of enormous magnitude. And this is precisely the state of mind we have so often condemned in our enemies.—*The Lancet* (Editorial, March 5th, "Bacterial Warfare").

THE VETERINARY RECORD

March 26th, 1949.

THE PET ANIMALS BILL

THERE seems little doubt that the Private Bill introduced into Parliament by Brigadier Peto to "regulate the sale of pet animals" will, in principle at least, evoke a sympathetic response from the veterinary profession.

Veterinary surgeons engaged in small-animal practice, particularly in or near large cities, have been concerned for many years over what has often been described as the "scandal" of pet shops. None can deny that much unnecessary and avoidable suffering has been caused to animals by their residence in, or passage through, such premises. Young puppies and kittens are probably the worst sufferers.

Much hardship is caused in the first place by the removal of puppies and kittens (and occasionally other animals, such as kids) from their dams at an unduly early age. The main reason for this would appear to be the desire of the breeder to part with them as soon as possible to save trouble, and on the part of the pet shop proprietor to obtain stock at the lowest possible cost. In these circumstances, it is commonplace to see puppies and kittens of three to four weeks of age exposed for sale in the windows of pet shops. Unless these infants pass quickly into the hands of an owner fully conversant with the principles of infant feeding and weaning—an only too rare occurrence—much suffering is caused; severe dietetic upset results, at best, in a set-back in growth and development which may never be made up; at the worst, in the onset of disease resulting in death after a few days or weeks of miserable existence.

Secondly, the incidence of infectious disease in the stock obtained through pet shops is inordinately high. The scouring/wasting syndrome so familiar to every canine practitioner that it has even become known as "dog shop disease," is an indictment in itself. Canine and feline distemper, hard pad disease, coccidiosis, sarcoptic mange, gross infestation with external parasites are only too common in animals coming from such premises, a state of affairs consequent upon the inefficient organisation of the vast majority of pet shop businesses. To maintain a pet shop business, it is usual for the owner to buy in from every possible source, known and unknown, young stock, regardless of its previous history, to ensure a constant supply of saleable pets. Adequate isolation and disinfection in such circumstances is well-nigh impossible. That a proportion of pet shop owners do consistently endeavour to maintain a high standard of hygiene under these conditions is much to their credit, and none will deny that satisfactorily run shops do exist. Unfortunately, however, they are but a small minority, and it is in an endeavour to raise the standards of the less salubrious majority that the Pet Animals Bill has been introduced.

A résumé of the main provisions of this Bill has already been published. While good in principle there are many loopholes; these are, in the main, matters of indifferent drafting and lack of definition which should be capable of simple yet adequate amendment. The majority are points on which our profession can, and should, offer its advice.

Subject to such amendment, the Pet Animals Act of 1949 seems likely to meet with wide approbation and to be a material step towards safeguarding the health and well-being of the many animals which give happiness to millions in their capacity as domestic pets.

CLINICAL COMMUNICATION

Immunological Relationship of Hard Pad and Distemper Viruses

F. G. GREER, M.R.C.V.S.

Leigh, Lancs.

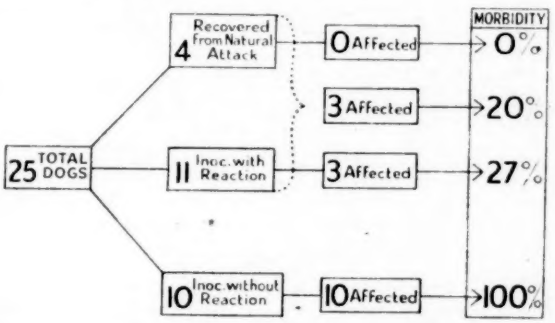
An opportunity occurred recently of obtaining evidence that there is some relationship between the viruses of hard pad and distemper.

In their paper to Congress, N.V.M.A., 1948, "Observations on Canine Encephalitis" (*Vet. Rec.* **60.** 635), MacIntyre, Trevan and Montgomerie stated that laboratory animals, if previously immunised against distemper, show less reaction when injected with hard pad virus, than do others which are known to carry no immunity from inoculation against distemper. Other observers similarly have recorded the impression that the disease of hard pad was milder in distemper-immunised dogs.

An epidemic outbreak amongst a kennels of 25 pedigree dogs was investigated. Two carcases and two blood samples from active cases were submitted for biological survey. Hard pad virus was found to be present in all samples. Distemper hyperimmune serum was administered to one out of every pair of susceptible ferrets, and these each received suspensions of spleen, blood, brain, and pad. Results were conclusive in establishing the presence of the hard pad virus.

The disease incidence was reviewed in relation to all other known factors—age, sex, age when inoculated, history of previous illnesses, etc.

From this analysis the following findings emerged. The 25 dogs consisted of 21 which had received vaccine-virus immunisation, and four older dogs which had survived a distemper attack. Of these 21 dogs 11 reacted clinically on administration of the dose of virus, whereas the remainder showed no visible signs at that time. The morbidity rate amongst these groups was 100 per cent. for the "non-reactors," 27 per cent. for the "reacting" group, and nil amongst those dogs known to have survived a severe clinical attack. If these two latter groups are bulked on the basis of their having had clinical distemper then the incidence of hard pad disease amongst them is only 20 per cent. The total number of dogs affected out of the 25, was 13 and of these none showed pad lesions visible to the naked eye.



In sharp contrast to the reported severe course of the disease, the average duration of illness was four days in 11 of the 13 cases. The remaining two were strong exceptions, and they were both destroyed after 20 and 70 days to terminate the epidemic, and also because hope of recovery appeared remote. Both cases came from the group of "non-reactors," and both had received sulphonamides.

Dietary arrangements in these kennels present no difficulty and remain precisely the same as they were 12 years ago. Ample good class meat is always available; mineral and vitamin supplements are fed. It seems difficult, therefore, to sustain dietary deficiency as a predisposing factor in hard pad disease.

Discussion and Conclusions

It would seem that an inverse ratio may perhaps exist between the severity of a natural attack of distemper and the mildness of any subsequent attack of hard pad disease.

Such a ratio may also exist between hard pad disease and the degree of reaction following administration of distemper virus in Wellcome immunisation.

A dog previously immunised against distemper is unlikely to show pad hardening if later it contracts hard pad disease.

ABSTRACTS

[The Status of Sodium Fluoride Treatment for the Removal of Large Round Worms from Swine. Foster, A. O., Enzie, F. D., Habermann, R. T., & Allen, R. W. (1948.) *Amer. J. vet. Res.* **9.** 379-385.]

This article will prove very useful to all research workers and practitioners interested in the treatment of pigs with sodium fluoride as an anthelmintic. It includes a résumé of all the information published to date, and gives a valuable list of references.

The facts which are emphasised are the efficiency and safety of the drug when used at the therapeutic dose and in the correct manner.

Therapeutic trials carried out by seven groups of investigators on a total of 308 pigs, showed an efficiency of 95 per cent. against ascarids, and of 93 per cent. against stomach worms when 43 pigs were involved. The anthelmintic was relatively ineffective against nodular worms, whipworms, and thorn-headed worms. The generally recommended dosage rate, 1 per cent. commercial sodium fluoride, in dry ground feed, gave an efficiency of 93 per cent. against ascarids and 62 per cent. against stomach worms.

In a comparison with oil of chenopodium and phenothiazine, it is noted that oil of chenopodium removed 182 (74 per cent.) of 245 ascarids from 59 pigs, and that phenothiazine removed 736 (36 per cent.) of 2,022 ascarids from 83 test pigs. Sodium fluoride has the additional power of removing immature as well as mature roundworms.

Toxic reactions following the use of sodium fluoride were infrequent, the most common being vomition, and soft faeces. These occurred in about 10 per cent. of cases and were only of short duration. Concentrations of 4 and 5 per cent. of sodium fluoride in the feed were very toxic, but lower concentrations, up to ten times the recommended dose, did not produce very serious reactions. The drug appears to have a self limiting effect on pigs, as overdoses invariably cause vomiting, and therefore the discharge and dilution of the drug.

Experimentally, and in field trials, it was found that methods of administering the drug other than in ground feed did not have any advantages, and frequently involved the risk of toxic symptoms. Methods employed were giving the drug in capsules, by stomach tube, and in swill. Vomition practically invariably followed any of these methods.

The authors recommend that further work be carried out to determine the optimum dose, but experience so far has shown that sodium fluoride administered in dry ground feed at a level of 1 per cent. for one day is a safe, effective and simple method of treatment.

G. C. B.

* * * * *

[Acute Pulmonary Emphysema in Cattle. Schofield, F. W. (1947.) *J. Amer. vet. Med. Ass.* **112.** 254-259.]

The condition known as acute pulmonary emphysema in cattle has been reported in Canada by Schofield, in Montana by Butler, in England by Barker and in Holland by Seekles. The disease is almost always associated with the consumption of succulent feed. In Canada symptoms usually appear within ten days of starting to graze on rape or kale. Serious outbreaks have occurred among cattle feeding on second growth alfalfa, newly seeded pasture, and, in one instance, on weeds in a neglected field. In England, the disease almost invariably occurs amongst cattle grazing on newly seeded pastures or on second growth grass or clover. In the United States the disease is related to feeding on low-lying lush pastures.

Schofield is satisfied that there is a significant relationship between feeding on lush pastures or highly succulent plants and the development of this disease. The disease is more prevalent in years when there is heavy rainfall, good growing weather and a rapid growth of large rank plants. In Canada farmers have for many years fed hay and straw to cattle when on rape and kale as a preventive measure. In that country a craving for hay and straw may be observed in cattle grazing rape and kale. The observation regarding this craving made by Gould is quoted.

If the soil has any effect on the aetiology of the disease it is thought to be due to its effect on the chemical composition of the plants.

Schofield describes his investigations into the possible relationship of the disease to specific bacteria. *Clostridium welchii* was recovered from a number of cases but neither this organism nor its toxin could be recovered in all cases of the disease. The toxins of *Cl. welchii* produce a condition that is almost identical with the disease as it occurs naturally. The results of this work suggest that *Cl. welchii* is probably one of several organisms capable of producing a toxin which, when absorbed, causes damage to the capillary bed of the lungs followed by oedema and emphysema. It is not understood what are the factors which cause the great proliferation of *Cl. welchii* or other toxicogens in the intestine.

Schofield does not accept the hypothesis that this disease is a manifestation of allergy due to the ingestion of a foreign protein. He favours the terminology of Barker who describes the disease as oedema of the lung. The alveoli contain varying quantities of serous exudate and in areas a slight polymorpho-nuclear infiltration. The bronchi contain a serous exudation. The interlobular connective tissue is oedematous and fissures caused by entrapped air are common. The designation emphysema was employed because of the striking and unusual spread of air forming large and small pockets throughout the lung and often beneath the skin. Extensive areas of degeneration and necrosis may be present in the liver and there is some desquamation of the intestinal epithelium with necrosis.

The most constant and characteristic symptom is severe dyspnoea accompanied by a short expiratory grunt. In two or three days subcutaneous emphysema may appear in the lower cervical and lumbar regions. The rumen may contain much or little feed, and slight tympany may be present. Frequently the animal is constipated, but there may be foetid diarrhoea and the passage of much flatus. There may be slight jaundice. Tachycardia and cardiac palpitation usually is evidenced and may be very pronounced. The mortality in Canada has varied from 5 to 35 per cent. of affected animals.

A mild form with a negligible mortality also has been reported.

It is emphasised that the greatest danger appears to lie in restricting animals to a highly succulent grazing. Though the exact chain of events in the pathogenesis is still undetermined, the formation of entero-toxins under the influence of an excessive intake of highly succulent food must be kept in mind.

[*Abstractor's Note.*—A condition apparently similar to this has also been observed in Scotland.]

G. F. B.

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[Collection of Sheep Blood by Intracardial Puncture. Lenderstruth, R. W., & Ward, B. O. (1948.) *J. Amer. vet. med. Ass.* **113.** 141-143.]

There are several disadvantages in obtaining samples of sheep blood by jugular venipuncture and the author has found the method of intracardial puncture more satisfactory. Three simple equipments are described, the type used depending on whether a large or small quantity of blood is required and whether or not it must be sterile.

The sheep is laid on its right side and the left leg is drawn forward. A 3 in. or longer needle of at least 16 gauge is inserted into the fourth intercostal space about 4 in. dorsal to the ventral side of the sternum. The needle should be inserted until the pulsations of the heart can be felt along the needle. Usually there is a flow of blood simultaneous with passage of these pulsations.

The author claims the following advantages for the method of intracardial puncture:—

1. There is no wool at the site, thus easing the operation.
2. The method is not so conducive to contamination as is jugular venipuncture.
3. The skin over the jugular furrow being loose, the clipped or exposed site on the skin is apt to move in relation to the underlying vein. This difficulty is avoided.
4. The ovine jugular vein is small and is not a big target for a 15 or 16 gauge needle.
5. Avoidance of excessive handling. This is useful in the case of pregnant or debilitated animals.

The author states that the method is convenient and rapid and no ill effects have been observed on any sheep sampled.

S. J.

(*Continued from page* 165.)

information on the particular veterinary problems peculiar to each territory outside their borders. The report was originally drafted in December, 1946, for the International Veterinary and Livestock Secretariat of U.N.R.R.A., South-West Pacific Area, in order that it might be submitted to other nations. It was based chiefly on information submitted by the veterinary authorities of the several Australian States and of the Northern Territory, data regarding Papua-New Guinea being taken from the report of the Army Veterinary Mission sent to that area in 1945. A revised and amplified text was then prepared following the recommendations of the Biennial Veterinary Conference of principal Commonwealth and State veterinary officers.

REVIEW

[A Review of Communicable Diseases of Animals in Australia, with Indications of their Economic Importance, Distribution and Incidence in 1946-47. By H. R. Seddon, D.V.SC., Commonwealth of Australia, Department of Health; Service Publication (Division of Veterinary Hygiene), Number 3: Canberra, Commonwealth Govt. Printer.]

Thirty years ago, speaking in London to the present reviewer while associated with him in post-graduate study at the Royal Veterinary College—and as if lamenting the dearth of problems for enquiry on return to Australia by a trained research worker—the author of the excellent monograph under review uttered the view that "unfortunately" Australia was an exceptionally clean country so far as animal disease was concerned. Since then, a vigorous and enterprising generation of veterinary research workers has arisen in Australia who not only have published first class work but have also charted the diseases prevalent in their country so thoroughly that, at first sight, on reading this monograph, one would gain the impression that Australia is a country where disease abounds and is serious. To counteract immediately such an erroneous impression, Dr. Seddon prints at the very beginning of the monograph a list of the major diseases of livestock which do *not* occur in Australia. Although a large portion of Australia lies to the north within the tropical or sub-tropical zone, some of the commoner tropical diseases, which cause such serious losses generally in the East and in Africa within a similar range of latitude, are entirely absent. Thus Australia is spared the worst diseases of those other territories in the form of cattle plague (rinderpest) and trypanosomiasis, though on one occasion in each case these diseases have actually been introduced but then promptly eradicated. The tropical diseases, babesiasis (Texas fever) and anaplasmosis, however, both prevail, in enzootic form, in Queensland, the Northern Territory and Western Australia and are of considerable economic importance. Contagious bovine pleuropneumonia, introduced in 1858, still remains a very serious disease in spite of strenuous efforts to bring it under control, so that in that respect, at any rate, Australia falls much behind Britain, where the disease was eradicated at least as far back as 1894.

In another respect, for reasons that are not easy to discern except by close scrutiny, some epizootic diseases which are still very disturbing in Britain have never gained a foothold in, or have been successfully eradicated from, Australia: these are, notably, swine fever, sheep scab and foot-and-mouth disease. In view of the paramount importance of the sheep rearing industry in Australia, the complete absence of the two greatest scourges, sheep pox and sheep scab, which are only too familiar to workers in other territories where the climatic conditions are not unlike those prevailing over large tracts of Australia, may be looked upon as a great blessing.

Anthrax, introduced in 1847, and in reality probably the greatest menace of extensive territories such as South Africa and Argentina where their important livestock economy is beset with somewhat parallel limitations, has now been circumscribed and confined in the main to relatively small areas in New South Wales and Victoria. Tuberculosis is a major disease of cattle and pigs throughout Australia and likewise brucellosis prevails in cattle in the dairying areas of all States, but is apparently absent from the beef-producing districts and the porcine type (produced by infection with *Br. suis*) which is absent from Britain has been recognised in Queensland, New South Wales and Victoria. Vaccination of cattle with Strain 19 has been undertaken in all States, and particularly in Victoria, where vaccination was commenced in 1943, both whole-herd and calfhood vaccination being then undertaken. By June 30th, 1947, 93,071 animals in 4,736 herds had been vaccinated, with, it is said, very gratifying results. Figures, of prime interest to British readers, are given to show that in heifers vaccinated in 1943, the abortion rate was 4·8 per cent. in 1944 and 4·4 per cent. in 1945; in heifers meanwhile retained unvaccinated, as controls, it was 36·8 per cent. in 1944. In cows also vaccinated in 1943, the abortion rate was 5·8 per cent. in 1944 and 4·8 per cent. in 1945; while in those retained unvaccinated, as controls, it was 8·8 per cent. in 1944 and 9·1 per cent. in 1945. In heifers vaccinated in 1944, the abortion rate was 3·6 per cent. in 1945, as compared with 22·0 per cent. in the heifer controls. Clearly, Strain 19 evoked a high degree of resistance against the prevailing infection, by reducing the abortion rate to nearly one-eighth, when employed in calfhood, and its beneficial effects were demonstrable during two successive years; but employed in adults, the benefits were not nearly so marked, the abortion rate being reduced to hardly more than one-half.

There is much else in this concise and accurate survey that is of absorbing interest and which makes it a valuable work of reference, of a kind indeed that ought to be compiled by the veterinary authorities of all territories, so as to give outside workers ready

(*Concluded at foot of page* 164.)

Questions and Answers

The submission of questions for inclusion in this column will be welcomed: they can relate to any aspect of veterinary work. For purposes of record, each question is numbered, and those submitting questions are required to furnish (not for publication) name and address.

Answers to readers' queries represent exclusively the personal opinions of the writers, and criticism of the replies will be appreciated.

All communications should be addressed to the Editor.

The Dishorning of Adult Cattle

Q. CCXCII.—*Can you give details of the methods of dishorning* ADULT *cattle, with particular reference to the instruments used for removing the horn and from whom they are obtainable?*

A.—The following details have been found useful by the writer, in the operation of dishorning adult cattle.

The animal is haltered and the shank of the halter is wrapped twice round a stout post in an open yard. The hair is clipped from around the horn base, but it is more convenient and saves time if the hair has been removed by the cowman the day or so before. A tourniquet to stop or diminish haemorrhage is applied and a Cox's chloroform mask adjusted. A piece of sacking or towelling is sprinkled with 1½ to 2 oz. chloroform, depending on the size and breed of the animal, and inserted into the mask. A rope is fastened to one hind leg and held by one or two assistants so as to prevent the animal blundering forward if it becomes excited. As a rule, as the chloroform takes effect, the animal pulls back and the shank of the halter may be then paid out and the animal sinks to the ground. On no account should the animal be pushed over as it is better and safer to administer the chloroform whilst it is standing. Complete anaesthesia is soon reached and the animal's head is propped up in a position to suit the operator, when the horn is swiftly amputated. The mask may now be removed as the second horn is being amputated and the leg rope also may be dispensed with. Most cows rise very soon after the operation but there is no hurry to raise them so long as they are in a sitting up position and conscious. Excitability is watched for and dealt with in some cases as consciousness is returning.

This operation may now be performed under a local anaesthetic of sufficient power to prevent the animal from feeling pain. The writer has tried out Planocaine 5 per cent. and Chlorocain, both in 5 c.c. doses, but has not had an opportunity of using other local anaesthetics. A number of cows are injected and taken in rotation so as to give the anaesthetic time to act. The injection is made deep into the muscle with a short stout hypodermic needle, say 12/10 by 3/4, about 1½ in. above the outer canthus of the eye in line with the centre of the base of the horn.

Amputation of the horn is accomplished by the use of the butcher's saw or the horn shears but the cut must be made through the skin about ¼ in. within the skin margin, otherwise the horn stumps will grow and the appearance of the animal's head becomes unsightly. The cut surface may be covered with cellulose wool, Stockholm tar, etc., or left alone. Horn shears are difficult to obtain but the usual instrument makers will take orders and supply customers when they can. This instrument should be of a powerful pattern and light enough to handle; it should have spare blades which are easily fitted and should be capable of cutting through the horn ¼ in. within the skin margin. The butcher's saw should be set on the cross and have not more than ten teeth to the inch. These saws are procurable at any reliable ironmonger's or from the usual instrument maker. The tourniquet used by the writer is the one described by Mr. W. B. Quarmby, M.R.C.V.S. in *The Veterinary Record* of September 4th, 1948, and it is found that if the hair is clipped and the cord is fitted well into the grooves under the horn roots it is quite easy to cut within the skin margin without severing the cord.

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Blood Extravasation from a Quarter

Q. CCXCIII.—*Could you tell me the best way to treat a heifer (Kerry) affected with persistent blood extravasation involving one quarter of the udder? The effusion is noticeable mainly in the strippings. This manifestation has been apparent in varying degree for the last two months. The heifer gives a normal yield for one of her breed, but is not a heavy milker. A sample of milk from the affected quarter recently was submitted for laboratory examination and a negative report has been received.*

A.—Extravasation of blood into the milk of a heifer which is freshly calved is of very common occurrence, due usually to rupture of the capillary blood-vessels, owing to extreme physiological hyperaemia of the udder. The condition usually subsides in a few days, though the respondent has on occasion seen cases which persist for weeks. In the case cited, however, one might suspect

a staphylococcal infection, in spite of the negative laboratory report; in such cases the administration of staphylococcus toxoid usually will effect a cure.

Haematinics such as liquor ferri perchlor or alum have been prescribed, and frequent gentle milking is to be recommended.

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Infertile Bitch

Q. CCXCIV.—*The subject is a three-year-old Sealyham bitch of nervous temperament. She comes into season regularly at intervals of seven months.*

The bitch would not stand when first mated at one and a half years but was successfully covered at the twelfth day of that heat by a proven sire, but did not settle. At the next heat she stood but did not settle. At her third heat she was allowed over a period of days, 7th to 14th, to be with two different dogs, but at no time would she stand to either.

No discharge has been seen from her apart from the normal mucus at her heat periods and she appears to be clinically and anatomically normal. No test for B.H.S. has been carried out.

Would hormone therapy assist in this case, and if so when should it be used and in what dosage?

A.—The most probable cause of infertility in the case described is inopportune service. The bitch in question is almost certainly sexually frigid, a not uncommon state of affairs in bitches, often allied to very strong maternal instincts. In such bitches the time of ovulation cannot be estimated even roughly as at no time does voluntary acceptance of the male indicate the onset of true oestrus. In the writer's view the first line of approach to such a case should be to ensure frequent service during the whole estimated oestrus period, *i.e.*, the bitch should be forced to accept service once daily, commencing at the tenth or eleventh day and continuing until the bitch either forcibly resists attempted service or the stud dog loses interest.

This method will ensure the presence of viable sperms in the uterus at whatever time ovulation should occur, and assuming that ovarian function is normal, pregnancy should result.

Hormone treatment of infertility in the bitch has so far given rather unreliable results. The use of luteinising hormone (L.H.) on the same day as service has been advocated, but in the writer's hands has proved of no avail. Its use is logical on the assumption that follicular maturation is not occurring, but in bitches which show a normal heat period this seems unlikely. If L.H. is tried a dosage of 100 i.u., preferably given intravenously, is suggested in this case.

It would appear that dog breeders, who rely upon one, and at the most two services, have lost sight of the fact that in natural circumstances coitus would take place once or twice daily throughout the whole period of acceptance, *viz.*, five to seven days; it is therefore not surprising that, despite the long viability of dog sperm *in vivo*, arbitrary choice of the day of service by the owner of the bitch ends in failure, unless the owner is able to detect very accurately from either the bitch's behaviour or the appearance of the external genitalia the onset of true oestrus.

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Correspondence

Certificate for Horse with "Technical" Unsoundness

Sir,—If Mr. Male interpreted my recent letter on this question to mean that I do not think that splints may be a cause of unsoundness I must apologise for the brevity which may have led him to make that mistake.

I was using splints as an illustration in the way in which Baron Parke, much more wisely, used pimples. In Kiddell v. Burnard (1842) he says: "If indeed the disease were not of a nature to impede the natural usefulness of the animal for the purpose for which he is used, as, for instance, if a horse has a slight pimple on his skin, it would not amount to unsoundness; but if such a thing as a pimple were on some part of the body where it might have that effect, as, for instance, on a part which would prevent the putting of a saddle or bridle on the animal, it would be different." The point here that I consider to be of great importance is that the same pathological condition may or may not render a horse unsound according to the circumstances in which it occurs.

I think the right approach to soundness is during one's examination of a horse to list any indications of injury or disease. One then considers and decides (and this is the most difficult and most important part of the matter) if any of them diminishes or is likely to diminish the usefulness of the animal. If none of them does this then one may certify the animal to be sound.

For one's own protection at law and for the information of the client it is advisable to mention on the certificate such conditions of disease or injury as have been observed and to state that one does not consider that they affect or are likely to affect the animal's usefulness.

If one considers that any of these conditions does, or is likely to, affect the animal's usefulness then the horse must be considered unsound.

Mr. Male has mentioned that various committees have failed in their attempts to give the profession a clear set of rules on this subject. Success in this direction is unlikely because soundness is not just a matter of lesions but includes their present and future effects. It is only the man on the spot who can give the purchaser of a horse what he requires—an opinion that the animal, which has been carefully examined, is, and is likely to remain, useful for its normal purposes.

Yours faithfully,

The Green, A. C. Fraser.
Aldbourne.
March 6th, 1949.

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"A Sequel to Milk Fever"

Sir,—I was interested in question CCXC, published under the above heading in your issue of March 5th, regarding recumbency with an extremely painful area just behind the withers in cattle.

I, too, frequently have noticed this condition as a sequel to milk fever, but have also met it in numerous recumbent cases unconnected with hypocalcaemia. I have regarded it as fibrositis with subcutaneous exudation, and the inability to rise is not so much due to paralysis as to the pain which the muscular effort involves.

The treatment used has been the application of a mustard plaster over the painful area and half ounce doses of aspirin twice daily. Possibly injection of an oily local anaesthetic of prolonged action might be successful. I find the cow usually gets up within two or three days.

Yours faithfully,

11, Langley Road, D. M. Hale.
Chippenham, Wilts.
March 8th, 1949.

Sir,—This, or an almost similar condition, frequently is encountered by us in this part of Somerset. The points of difference between the cases seen by the questioner and by us are mainly as follows:—

(1) The condition is very rarely a sequel to milk fever. It is post-parturient, but is almost always unrelated to any of the post-parturient metabolic disorders—it exists *per se*.

(2) The area of extreme pain, even with light pressure, seems to be in the longissimus dorsi muscles—from the dorsal angle of the scapula back almost to the last rib and extending out on either side of the dorsal spines for three or four inches.

(3) The muscles can be felt to be soft and oedematous, and in severe cases the actual muscle fibres can be felt to separate under the fingers.

(4) There is never paralysis in our cases, just inability to rise, owing apparently to the acute pain in the muscles when flexed in attempting to get up.

(5) A mustard plaster is a most effective treatment in every case, the cow always getting up within three days, most usually within two.

We have never had the blood examined, neither have we tried sodium acid phosphate as suggested by the respondent, a mustard plaster on the affected area being the only treatment required.

Yours faithfully,

Renwick House, L. F. Slater.
12, Compton Road,
Shepton Mallet, Som.
March 9th, 1949.

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Umbilical Hernia in the Foal

Sir,—Regarding the short paragraph on page 116 of the issue of *The Veterinary Record* of March 5th, I can assure Mr. Railton, or any other critic of blistering the navel in cases of umbilical hernia, that there is no risk at all, and during the 30 odd years that I have been in practice, I always try this first in all such cases, on all breeds, and whether male or female.

To date, I have not had any adverse effect, and the results over this period of time will not make me alter my procedure. Naturally, the navel is not plastered with the blister. A mild one is used, and enough is employed to cover the swelling, and rubbed in. In point of fact, as will be realised, the amount is very small. Where necessary, this is repeated in a month to six weeks. I have yet to see a foal suffer any ill effects or show signs of distress, even in bloodstock.

My late father, too, adopted this treatment, and I believe did at times use a biniodide blister.

As regards the use of a truss, I have never tried this and I should

think it would require frequent attention. Generally, bloodstock foals resent anything of this nature, and even a rug being put on in some cases causes great excitement: at least, this is my experience.

I remember, many years ago now, when Albrechtsen introduced the operation for correcting infertility (and being keen, I at once adopted it), I was told by some who were my seniors in the profession at that time, that if I retracted the os, I would bring about complete uterine prolapse! Still time marches on, and I shall continue to apply blister to cases of umbilical herniae.

Yours faithfully,

"Rothiemurchus," J. F. D. Tutt.
St. Cross,
Winchester.
March 5th, 1949.

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Head Nodding in Young Dogs

Sir,—I should like, if I may, to add something further in regard to this condition. I am surprised that no mention is made in the answer to Question CCXCII (March 5th) of the previous Q. and A. CCLXXXIV (January 29th). I have little doubt that both these questions refer to the same condition. From the answers given, however, it would appear that their author or authors do not recognise this syndrome as a clear cut clinical entity, *i.e.*, having no obvious connection with any other recognised nervous disease displaying somewhat similar symptoms. Instead, in one answer (CCXCII) the opinion is given that it "sounds very like chorea" and in the other answer (CCLXXXIV) that "the impression given is that of a palsied person and is quite distinct from chorea." I should like to endorse the views expressed by both questioners in respect of their description of the complaint. I have observed it for several years now in the breeds referred to (spaniels, golden retrievers, alsatians) and I can add one other breed, namely, wire-haired fox terriers. It does not occur to my knowledge outside these breeds. The condition has no recognisable connection with distemper or hard pad disease but is associated closely, as suggested (CCLXXXIV), with canine-hysteria (H. Parry's suggested nomenclature). I have never seen it personally in dogs over 12 months of age and generally it has occurred in puppies four or five months old. The nervous symptom which is the only symptom exhibited is not and does not remotely resemble chorea. It is difficult indeed to suggest a descriptive term, especially when the client is dissatisfied without something tangible. Largely for the benefit of the latter I have described it as being a nervous "tic." It differs, however, from a simple "tic" in that there is nearly always a summation of effect from its commencement with several short nods of the head followed by progressive slight involvement of the fore-end of the body. This is succeeded finally by the fore legs slipping forwards to such an extent that the puppy becomes aware of its loss of balance and instantly corrects this. I have never seen complete loss of balance occur nor indeed have I ever seen any other symptom than the above. The symptom can be arrested in one of three ways (1) spontaneously; (2) by distraction, especially if action is involved; (3) by sleep. In respect of aetiology I group the condition in the syndrome "canine-hysteria" and not amongst that of the possible virus diseases. I have had as much success in its treatment as I have had with canine-hysteria itself and remain entirely sceptical as to the value of anything other than sedatives. As with canine-hysteria, however, I find that a fair number of head nodders cure themselves as they attain adult age.

Finally, might I make the earnest plea at this point that some recognised basis of nomenclature be adhered to in the discussion of nervous symptoms in dogs, especially when referring to the epileptic or convulsive conditions. I put forward the suggestion that for this purpose H. Parry's recent paper—"Epileptic States in the Dog with special reference to Canine Hysteria" (*Vet. Rec.* January 15th, 1949)—is eminently suitable. On that basis, in my opinion, head nodding comes into the category of Parry's petit mal epilepsy (Table I section 3, sub-section (a)), and belongs to either syndrome C or syndrome A, and is the clinical manifestation No. 3.

Yours faithfully,

Blackburn, Alexander H. Hogg.
Lancs.
March 6th, 1949.

The International Pharmacopoeia.—Monsieur Paul Blanc has been appointed secretary to the Expert Committee on the Unification of Pharmacopoeias of the World Health Organisation. M. Blanc is a Swiss pharmacist who has spent many years in the pharmaceutical industry in Canada. Communications intended for this Committee should be addressed to him at the Palais des Nations, Geneva, Switzerland.

IN PARLIAMENT

The Pet Animals Bill

The House gave an unopposed second reading on Friday of last week to the private member's Bill—The Pet Animals Bill—designed to regulate conditions under which pet animals are kept for sale and are sold.

The Bill is Brigadier Peto's, and in moving the second reading Brigadier Peto said the object of the Bill was to prevent unnecessary suffering to animals while they were in the premises of pet shops, and also to prohibit the casual sale of pet animals in the streets. Many pet shops throughout the Kingdom were well run, but there were some in which the conditions were far from ideal. Indeed, there were a few in which conditions were so far from ideal that actual cruelty was likely to be engendered.

In the worst types of pet shops the proprietors were more concerned with making profit in the minimum of time and with a quick turnover than with either the comfort and health of the animals prior to sale or whether or not the animals on sale might die almost as soon as they were sold.

One of the most important parts of the Bill provided for the lawful inspection of premises and of the animals kept on the premises. Under the Protection of Animals Act, 1911, very few cases where complaint had been made had resulted in successful prosecutions. That was mainly due to the fact that the only part of the premises which could be looked at was the front, where the animals were actually on sale. No right of entry existed under that Act for going into the back of the premises, underground into the cellars or upstairs into the rooms or attics. The Bill sought to give the right of entry to certain people, when ordered or authorised to do so by the local authority.

Clause 1 proposed that pet shops should be licensed by local authorities, upon payment of fees, and made it possible for the local authority to refuse to give such a licence if, in their opinion, the premises were totally unsuitable. It also gave the local authority power to withdraw a licence on the conviction of the tenant or occupier of the premises for cruelty, or for some other reason of that sort.

Clause 2 provided that certain rules (contained in the Schedule) should be observed. In addition, it was intended to give the purchaser of a pet animal some slight degree of guarantee that the animal was in a healthy and fit state when sold and would not die within three days. The most important part of Clause 2 was probably subsection (3), which was not worded as clearly as it might be, but which sought to prohibit the sale of pet animals in any other place than a pet shop itself or a store in a market, *i.e.*, the casual sale of animals in the street. Most of the complaints that came forward were due to unweaned puppies being sold in the streets and to thefts of animals which were sold, subsequently either in a market or in a street.

Clause 3 gave the right to the local authority to order an inspection of premises which were being used as a pet shop, and, of course, of the animals therein. At present no veterinary or other inspection was allowed to be ordered by a local authority when a complaint was made. Animals were kept underground over the week-end with little water and with little or no light. There had been many cases of overcrowding and lack of sanitation.

The Clause empowered local authorities to authorise veterinary surgeons to carry out inspections, and he had the authority of the Royal Society for the Prevention of Cruelty to Animals to say that at his request they had circulated a letter to local authorities saying that in the event of payment to a veterinary surgeon being necessary in England and Wales the Society were prepared to defray the expenses. That explained why there was no Financial Resolution in connection with the Bill. Such provision would not be necessary.

Clause 4 provided for a penalty not exceeding £50 on summary conviction.

Clause 5 defined "pet animal" and other expressions. If it was not in accordance with what the majority of hon. Members considered to be right, it could be amended later. The "pet animal" and "pet shop" definitions were not intended to apply to those who bought and sold horses or conducted riding schools. He understood that they were already subject to inspection. Neither did the definitions nor the Bill seek to cover those engaged in aviculture and those who bred birds such as budgerigars and parakeets for a hobby and sold off surplus stock as and when they had to do so.

Nor did the Bill seek to cover private individuals who bred dogs in kennels, which were not pet shops.

In the ensuing debate the Bill was generally welcomed.

Mr. George Wigg referred to the widespread practice of selling

day-old chicks often in paper bags and sometimes straight into the hands of quite young children. The sale of unweaned puppies and of kittens was also widespread. These practices were rife in the poorer quarters of our great cities. He was quite sure that if this Bill was given a second reading it would not discourage the practice of keeping pets. On the contrary, provided the pet shops were well conducted and those who purchased pets from them were willing to gain the simple knowledge required to keep those pets, it would lead to a great extension of the practice, with the most desirable results. There was no better way of teaching young children responsibility and regard for others than to give them a pet. Too often children were encouraged by unscrupulous persons to part with small sums for puppies or for chicks, and the parents did not want those animals. It meant that they are left either to fend for themselves or they become neglected. The result was the same—a painful death. The control of pet shops was concerned not only with kindliness and the humane treatment of animals, but also with proper facilities to purchase pets which if properly treated played an important part in the moulding of the character of young children. If the Under-Secretary and his opposite number in the Ministry of Education would tackle the problem of delinquency from that angle, and encourage local education authorities to organise pet quarters and encourage the keeping of pets, he was sure it would be a most useful means of removing juvenile delinquency.

Sir Jocelyn Lucas, a member of the Kennel Club Committee, which is the ruling body of the dog world so far as the registration of pedigree dogs and dogs for exhibition is concerned, said the Kennel Club were anxious to safeguard the interests of breeders and exhibitors of pedigree dogs and so desired amendment of Clause 5. On the other hand, however, a Member of Parliament should take as broad a view as possible, and he felt that in this matter they had to look after the interests of the three P's: the public, the pets and the pet shop proprietors. He should like to think that regard would be paid to the honesty of the person involved. The Kennel Club, as the ruling body, could warn off or bar people for life from breeding or showing dogs under Kennel Club rules; it also barred their dogs and their progeny from being registered or shown. That meant that a dog which was sold from a dog shop whose proprietor was disqualified could never be shown, exhibited or bred as a pedigree dog, unless, of course, the man sold it merely as an agent. Before a licence was granted to a pet shop proprietor, an enquiry might well be made by the local authority to the Kennel Club to ascertain whether or not the person concerned was on the black list. The normal cause for disqualification was the continual selling of dogs with faked or false pedigrees.

On the question of hygiene, he thought that the average pet shop at present was a hotbed of infection. Sooner or later somebody was bound to send in a puppy which had distemper, and when that happened the disease would go through the whole shop. No breeder of pedigree dogs would ever dare to buy a puppy, however good it might be, from a pet shop unless he knew that first it had been inoculated or immunised. He suggested that some sort of star might be given to pet shops which had all their puppies immunised—temporarily immunised—by a veterinary surgeon on their arrival. The cost was not great, and a purchaser would gladly pay the extra price because he would know that he had a reasonable chance of getting a healthy puppy, instead of its being an even money gamble whether or not the puppy lived.

Miss Colman said she would like to see it provided in the Bill that local authorities would have the power to refuse licences to keep pet shops to persons who had been convicted of cruelty to animals. The Bill made it possible to refuse licences only to persons who had kept pet shops which had been declared to be unsuitable. The Bill would do much to prevent ill-treatment of pet animals, especially in markets and streets. It would be possible to sell pet animals in market places only by licence and only where the premises or stalls were considered by the local authority to be suitable would licences be granted.

Mr. Paget said he had often felt that our system of licensing dogs was a thoroughly illogical one. We ought to license dog owners, and the licence should be subject to a proper examination in the same way as was the motor driver's licence.

The Under-Secretary of State for the Home Department (Mr. Younger): It was quite clear that hon. Members on all sides of the House were in favour of the principle which lay behind the Bill. It was also clear, however, that the carrying into practice of that principle was not entirely an easy matter and that there were a good many reservations to be made.

That was not the first time that proposals of approximately this kind had been brought to the notice of the Home Office by various societies interested in the prevention of cruelty to animals. On past occasions the difficulty had always been to satisfy oneself as to the need, and the extent of the need, for provisions of that kind, including, as of course they did, penalties under the criminal law. It was rather a remarkable fact that, so far as he had been able to ascertain, there was no record in the Home Office of complaints about this matter prior to about a couple of years ago and they had, in fact, virtually no evidence one way or the other in the Office about the need for a Measure of that kind.

Under the Protection of Animals Act, 1911, it was already an offence to cause unnecessary suffering to an animal or, if one was the owner of it, to permit such suffering to be caused. It was also an offence to convey or carry an animal in a manner which was likely to cause unnecessary suffering. There were certain provisions which might have a limited effect on the problem in the Public Health Act. They only affected the position if the keeping of pets gave rise to some kind of nuisance, in which case there were certain powers of inspection. Under that Act mention was specifically made of a nuisance caused by the manner in which animals might be kept. Nevertheless, he quite agreed that under that Act the provisions were very limited.

The real difficulty—and he imagined this would be the contention of the promoters of the Bill—was that there was no evidence at the moment because there was no adequate means of obtaining the evidence, although it would be said that there was a widespread knowledge of a general kind that thoroughly bad conditions existed. It might be that the fact that there was not, at the moment, a system of licensing and the power of entry and inspection of the whole of the premises contributed to that difficulty.

He did not want to appear to be crabbing the Bill too much, but he thought it was his duty, particularly as all hon. Members had shown themselves anxious that something should be done to cover the subject, to point out some of the difficulties. They must be sure that the offence which they created under the Bill was definite, well understood, and approved. They were giving new powers of entry into premises, including, in certain instances, the private dwellings of the people concerned. They were also putting a certain amount of work—perhaps not much, but some—upon local authorities: it might be that some would welcome this.

His hon. and learned Friend the Member for Northampton (Mr. Paget) said he thought very considerable re-drafting would be necessary, and he and one or two others indicated that it would be in the nature of tightening up, and for catching other malpractices which were not covered by the Bill at present. That might be so, but he would submit to the House that re-drafting might also be in the other sense—that they might feel they were creating a rather considerable apparatus, that they were creating a heavy criminal offence, and that they must look very narrowly indeed at the need for creating the offence; and might find that in certain respects they had to narrow down the provisions of the Bill as it stood at present.

The Bill was read a second time, and committed to a Standing Committee.

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Traffic in Horses : Government Committee of Enquiry

Mr. G. Brown, Parliamentary Secretary, Ministry of Agriculture, announced in the House of Commons on Monday last that the Government have considered the slaughter of horses for human consumption, and other related questions about traffic in horses, and have decided to set up a small committee of enquiry. The constitution and terms of reference will be announced as soon as they have been settled.

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Questions

Cruelty to Animals (Enquiry)

Earl Winterton asked the Secretary of State for the Home Department what will be the terms of reference of the committee to enquire into practices of alleged cruelty to animals.

Mr. Lipson: In considering this matter will the right hon. Gentleman bear in mind the advisability of not extending the scope of the enquiry to all animals but of confining it to wild animals? Otherwise, the enquiry will take too long.

Mr. Ede: The question asked last week arose out of specific

matters. I will endeavour to see that the terms of reference are so framed that a reasonably speedy result can be achieved.

Mr. DUMPLETON: When considering the terms of reference, will my right hon. Friend take note of my Amendment on the Order Paper to the Motion on "Cruelty to Wild Animals?"

["*including the desirability of establishing a National Wild Life Trust to be responsible for the guardianship of wild animals and birds, with powers to regulate the control of their numbers by approved methods..*"]

Mr. EDE: Note has been taken of my hon. Friend's Amendment, and it will be considered when the terms of reference are being drafted.

Earl WINTERTON: Is the right hon. Gentleman aware that there is a very considerable difference of opinion, which is by no means on party lines, on this matter, and that many of us believe that the terms of reference should be much wider than has been indicated? Will the right hon. Gentleman give full consideration to this question upon which, as I said, there is no division on party lines?

Mr. EDE: I am very anxious to avoid the usual cliché "every relevant factor will be taken into consideration," but the spirit of that well-known Parliamentary statement will be borne in mind.

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HORSES (EXPORT)

Mr. HASTINGS (Mar. 14th) asked the Minister of Agriculture what precautions are taken to ensure that all horses exported on licence to Belgium and the Continent are not prevented by age or infirmity from being capable of work.

Mr. G. BROWN: The exportation to the Continent of Europe of horses that are not capable of being worked without suffering is prohibited by the Diseases of Animals Acts. Except for certain special classes of horses, such as racehorses and breeding horses, every horse exported to Europe is examined by one of our veterinary inspectors and certified by him to be capable of being conveyed by sea and disembarked without cruelty and to be capable of being worked without suffering.

Mr. HASTINGS: When my hon. Friend says that the animals are capable of being worked without suffering, have any precautions been taken to see that they are able to continue at work for some considerable time?

Lieut.-Colonel Sir THOMAS MOORE: What control can the Government exercise over these horses once they reach the Continent? Would it not be much wiser not to be a party to this dubious traffic?

Mr. BROWN: I think the answer to the Question is quite clear, but in so far as we are to go over last week's discussion, I would repeat that my right hon. Friend has undertaken to review the whole question to see whether anything useful can be done.

Sir F. SANDERSON: Would not a simpler way of dealing with the matter be that no horses should be exported at a value under, say, £100?

Mr. BROWN: That is precisely the sort of matter which is being considered by my right hon. Friend.

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MEAT TRANSPORT, MAIDENHEAD

Mr. MOTT-RADCLIFFE (Mar. 14th) asked the Minister of Food whether he will enquire into the methods adopted by his Department for conveying meat between central slaughterhouse and butcher's shops in the town of Maidenhead; and what steps he is taking to improve the cleanliness of the vans so used.

Dr. SUMMERSKILL: We had already arranged for these vans to be overhauled and made more up-to-date. The necessity for cleanliness is constantly impressed on all connected with the distribution of meat.

Mr. MOTT-RADCLYFFE: In making those arrangements will the right hon. Lady ensure that there will be facilities for hanging the carcases in the vans and that they will no longer be kicked about on the floor by men in dirty boots?

Dr. SUMMERSKILL: That is what we are trying to do with these vehicles—to arrange that all meat will be hung in future.

UNIVERSITY OF BRISTOL VETERINARY SCHOOL

We are advised that the Veterinary School of the University of Bristol cannot accept any more applications for entry as a veterinary student in October next as all places available have already been filled and there is a long waiting list.

Applications for entry in October, 1950, must be received not later than December 1st, 1949.

NOTES AND NEWS

Diary of Events

Mar. 30th.—Meeting of the West of Scotland Division, N.V.M.A., at the Glasgow Veterinary College, 6.30 p.m.

Mar. 31st.—Special General Meeting of the South-Eastern Division, N.V.M.A., at Maidstone (Royal Star Hotel), 6 p.m.

Mar. 31st.—Meeting of the North Wales Division, N.V.M.A., at Bangor (School of Agriculture, Memorial Building), 2.30 p.m.

Apr. 5th, 6th and 7th.—Quarterly Meetings of Council, R.C.V.S.

Apr. 6th.—Meeting of the Editorial Executive Sub-committee, N.V.M.A., 36, Gordon Square, W.C.1, at 2.30 p.m. (*Brought forward to first Wednesday in the month*).

Apr. 7th.—Meeting of the Central Veterinary Society at the Royal Veterinary College, Camden Town, 6 p.m.

Apr. 12th.—Central Veterinary Society: One-day Poultry Course at the Royal Veterinary College, commencing at 10.30 a.m.

Apr. 13th.—Meeting of the Comparative Section of the Royal Society of Medicine, at 1, Wimpole St., W.1, 5 p.m.

Apr. 20th, 21st and 22nd.—Quarterly Meetings of Committees and Council, N.V.M.A., in London (Meeting of Council, April 22nd).

Apr. 21st.—Annual Race for the R.A.V.C. Point-to-Point Challenge Cup, at Melton Mowbray (Quorn Hunt Meeting).

Apr. 23rd.—Association of State Veterinary Officers: Annual Meeting at the Royal Veterinary College, Camden Town, 2 p.m.; Annual Dinner at the Criterion Restaurant, Piccadilly, 6.30 p.m.

Apr. 27th.—Meeting of the Southern Counties Division, N.V.M.A., at Southampton (Polygon Hotel), 6 p.m.

Apr. 28th.—Special Meeting of the Central Veterinary Society at the Royal Veterinary College, Camden Town, 2 p.m.

May 3rd.—R.C.V.S. Animal Management Examination tour, commencing with London.

May 16th.—R.C.V.S. Pharmacology, etc., Examination (Revised Syllabus). Written, 10 to 12 noon, at appropriate Colleges.

May 16th.—Annual Meeting of the R.A.V.C. Golfing Society, at North Hants Golf Club, Fleet, 10 a.m.

June 1st (Wednesday).—Annual General Meeting of the Royal College of Veterinary Surgeons.

June 1st, 2nd and 3rd.—Quarterly Meetings of Council, R.C.V.S.

June 7th and 8th.—D.V.S.M. Written Examination, Royal (Dick) Veterinary College, Edinburgh.

June 23rd. and 24th.—R.C.V.S. Membership Written Examination.

Aug. 8th to 13th.—Fourteenth International Veterinary Congress, Central Hall, Westminster, and Church House, Westminster, London, S.W.1.

Aug. 12th to 15th.—Sixty-seventh Annual General Meeting and Congress, N.V.M.A., in London.

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PERSONAL

Births.—CLARKE.—On March 20th, 1949, at the Maternity Home, Bloxwich, Walsall, to Kathleen (*née* Longmore), wife of A. Vernon Clarke, M.R.C.V.S.—a daughter (Pauline Mary).

DOUGLAS.—On March 6th, 1949, at Shrublands Nursing Home, Croydon, to Elizabeth (*née* Mennie), wife of S. W. Douglas, M.R.C.V.S., of the Royal Veterinary College, N.W.1—a son (Malcolm Gordon).

PHILLIPS.—On February 27th, 1949, at Ipswich, to Joyce Osborn, M.R.C.V.S., wife of Capt. R. N. Phillips, M.R.C.V.S., D.V.S.M., a son (Richard Alastair).

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Jurat Sir Daniel Cabot.—Sir Daniel Cabot, M.R.C.V.S., has been elected, unopposed, a Jurat (Juré-Justicier) of the Royal Court of Jersey. The robing and swearing-in ceremony took place on March 12th, in the presence of H. E. the Lieut.-Governor at a special session of the Full Court, in the simple, dignified traditional manner.

NOTE: The character of the office of Jurat is essentially judicial, the Royal Court dealing with civil and criminal cases arising in the Bailiwick of Jersey. The Jurats, of whom there are twelve, serve in an honorary capacity and are not subject to re-election. Election to the office of Jurat is the greatest honour which the Island can bestow upon one of its citizens. At the swearing-in of a new Jurat it is customary to use the French language.

Professor W. I. B. Beveridge and Doctor C. W. Ottaway are to represent the University of Cambridge at the 14th International Veterinary Congress from August 8th to 13th.

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Illness of Professor Scorgie.—We learn with regret that Professor N. J. Scorgie, Courtauld Professor of Animal Husbandry at the Royal Veterinary College, was taken ill suddenly on Sunday, March 6th, and is now undergoing treatment for duodenal ulceration in a Reading nursing home. He will be unable to resume his duties for some weeks and we are sure that his many friends both within and without the veterinary profession will join with us in wishing him a speedy and complete recovery.

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R.C.V.S. OBITUARY

Cowx, Joseph Braithwaite (late of Teignmouth and Liverpool). Graduated N. Edinburgh, March 30th, 1896. Died (in Bournemouth), March 11th, 1949; aged 76 years.

Holland, Harry Walter, High Street, Cranbrook, Kent. Graduated London, December 22nd, 1923. Died March 12th, 1949; aged 51 years.

THE LATE MR. A. S. F. MONTEFIORE

Tributes

The R.V.C. Students' Union Society write:

It is with a great sense of regret that we record the tragic death of A. S. F. Montefiore—"Monty" to all his friends—at the early age of 28 years. He was a man of great ideals—a man who, had he lived, would, undoubtedly, have been a prominent figure in the veterinary profession. He came to college in 1937, and volunteered for service at the outbreak of war. He joined the Royal Army Veterinary Corps, and was posted to Palestine. During the Greek campaign, he was taken prisoner and was a Prisoner-of-War for four years, during which time he escaped twice. He came home in 1945, and returned to college in January, 1946, when he took an immediate interest in college activities. As President of the Royal Veterinary College Students' Union Society and President of the Association of Veterinary Students he showed us some of these qualities so essential to a good leader—coolness, purpose, good judgment and an unfailing sense of humour. His untimely death is certainly a great loss to student and veterinary life and we would take this opportunity to extend heartfelt sympathy to all his relatives.

J. A. Ibbetson, of Well Barn, Moulsford, Berkshire, writes:

As a fellow student of the late A. Montefiore may I pay tribute to one who hated and fought against apathy and indifference, and succeeded in putting into practice these ideals of behaviour towards other people and towards his work, which the rest of us, even if we are aware of them, have not the courage or strength to live up to.

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THE ANIMAL HEALTH TRUST

Mr. Graham Cherry Appointed Appeals Secretary and Information Officer

The Animal Health Trust announces that Mr. Graham Cherry will shortly join the Animal Health Trust as its Appeals Secretary and Information Officer. He will develop the Trust's appeals campaigns and handle its press and public relations.

Mr. Cherry, who is 38 years of age, was educated at St. Albans School and Lincoln College, Oxford (M.A.), and entered upon an educational and literary career: he is the author of "The Mind's Eye" (A. and C. Black, 1939). After a distinguished military career during the Second Great War, with the rank on discharge of Lieut.-Colonel, he joined the N.F.U. Publicity Department at the end of 1945. In August, 1946 he became Publicity Officer, Milk Marketing Board and Editor, *The Home Farmer*, having held these appointments to date. He has developed *Milk Facts and Figures* and has been responsible for the Board's exhibits at major agricultural shows.

Mr. Cherry has served on the following committees: Publicity Committee, Animal Health Trust; Executive Committee, Exhibitors' Association; Film-viewing Committees (agricultural films) of the British Film Institute and Scientific Film Association; also on the Farming and Poultry Advertisement Control Board. He is a member of the R.A.S.E., the Farmers' Club and the Guild of Agricultural Journalists.

COMMEMORATION OF DISCOVERY OF ANTITOXINS

The French National Veterinary Committee for the Commemoration of the 25th Anniversary of the Discovery of Antitoxins, under the presidency of Professor Leclainche, member of the *Institut de France*, director of the *Office International des Epizooties*, has decided to hold the ceremony of commemoration at the *Maison de la Chimie*, Paris, on Friday, June 10th, 1949.

In order to give to this occasion all the publicity which it deserves, a subscription has been opened, "to which can and must contribute all those scientific or professional organisations and all the members of the great family of medicine, all the friends of Gaston Ramon, all the admirers and benefactors of his work."

All individual subscribers of the sum of 1,000 francs will receive an original work by Gaston Ramon, published specially for this occasion and signed by the author.

In order to facilitate the organisers' task, payments should be made now to the treasurer of the Committee: Dr. Aubry, Vétérinaire, Abattoirs de Lisieux Compte Chèques Postaux Rouen 76-58.

All correspondence must be addressed to the secretary: H. Péan, Vétérinaire, 167, rue de Crimée, Paris 19e.

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BROADCAST WARNINGS OF LOST DRUGS

At the March meeting of the Council of the Pharmaceutical Society of Great Britain, the Secretary and Registrar reported that, in reply to representations by the Society, a letter had been received from the B.B.C. stating that the practice of broadcasting police messages about lost or stolen drugs would be discontinued in the Metropolitan Police district. An exception would be made where there was reason to believe that real danger to life existed, or in cases where drugs or poisons had been known to be purchased in mistake for some harmless medicine. It was agreed to suggest to the B.B.C. that this change might be extended to the rest of the country as well as the Metropolitan Police district.

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UNIVERSITY SALARIES: SUPPLEMENTARY GRANTS

The Chancellor of the Exchequer, in a Parliamentary written reply, announces that he has accepted the view of the University Grants Committee that the increase of salaries in the medical faculties carries with it as a necessary consequence a revision of salaries in the other faculties.

The provision made for the universities in the Civil Estimates for 1949-50 will enable supplementary grants to be made for the purpose of readjusting non-medical salaries on the following basis from October 1st:—

Professors.—The grants will be related to basic salaries of £1,600 a year in universities and university colleges (in London £1,650), with increased provision for supplementation allowing for a wider range of salaries than hitherto.

Readers and Senior Lecturers.—A range of salaries with varying maxima up to £1,600 a year.

Lecturers.—Scales rising generally from £500 to £1,100 a year.

Assistant Lecturers.—Salaries ranging from £400 to £500.

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ACADEMIC SALARIES IN MEDICAL AND DENTAL SCHOOLS

New salary scales for professors, lecturers, and readers in medical schools and in dental schools were the subject of a written reply by Sir Stafford Cripps to questions which were put to him on February 28th by Sir Ernest Graham-Little and Mr. Somerville Hastings, and in reference thereto *The British Medical Journal* observes in its issue of March 5th: "Both the University Grants Committee and the Committee of Vice-Chancellors and Principals have had under consideration the effect of the Spens Report on the Remuneration of Consultants and Specialists on the salaries of medical and dental staffs at the universities. Both committees have been seriously concerned about the effect on staffing and recruitment of the disparity between the present academic scales and the rates of remuneration proposed for consultants and specialists by the Spens Committee. The proposals they put forward have been accepted by the Chancellor of the Exchequer, and the University Grants Committee has therefore written to the Vice-Chancellors indicating the revised general limits of salaries in the medical and dental schools for which supplementary grants will be made in the current quinquennium. Determination of the salaries of individual members of the staff will continue to be entirely within the discretion of the universities, but provision will be made in the estimate for the financial year 1949-50 to allow of supplementary grants being made for the purpose of readjusting salaries within the proposed limits.

"The revised salaries for full-time clinical posts, which are to be

paid from a date not earlier than April of this year, are: professors, £2,250 to £2,750 a year; lecturers, £600 to maxima of £1,500 to £2,000 a year, or in the case of lecturers holding posts of special responsibility, such as a headship of independent departments, £2,500 a year; salaries for readers will be within the range of the maxima for lecturers. For full-time preclinical posts the revised salaries will be paid from a date not earlier than October 1st of this year and will be: professors, £2,000 to £2,500 a year; lecturers, rising from £600 to maxima ranging from £1,200 to £1,800 a year; readers, salaries within the range of the maxima for lecturers. It will be for the universities to decide in borderline cases whether particular posts should be treated as clinical or preclinical; for example, the University Grants Committee would regard it as reasonable if certain posts in the departments of pathology and bacteriology were treated as clinical posts."

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"A.I. PEDIGREE STALEMATE"

In our issue of March 12th under the above heading, we published details of a report appearing in the *Farmers' Weekly* in which reference was made to a meeting called by the Shorthorn Society which was attended by representatives of other Breed Societies.

The Milk Marketing Board state that the report in question is misleading in the following respects:—

"(1) The report states that the chief Breed Societies were represented at the meeting. We believe that the Friesian Breed Society, numerically the largest, was not represented.

"(2) The report suggests that the difficulty about approval of A.I. bulls and the registration of A.I. progeny exists only between Board A.I. centres and the Shorthorn Society. This is not so; as the Society knows, the representative of certain non-Board A.I. centres on the Central Advisory Committee on A.I. objected as strongly as the Board to the Society's contention that the present democratic procedure of bull selection should be interfered with either by giving the Society the right to reject bulls properly licensed for A.I. or to nominate Society representatives on all A.I. Committees. The present system by which A.I. Committees find as many bulls as they can and present them, through the Board, for licensing to the Ministry of Agriculture, is working very satisfactorily.

"(3) The report suggests that there is a stalemate on the subject. This will be news to Shorthorn pedigree members of Board and non-Board centres, for they were quite recently informed that the Shorthorn Society had suspended the rule and that their A.I. calves are accepted for registration.

"The Shorthorn Society's contention was discussed at great length by the Ministry's Central Advisory Committee on A.I. As a result the following formula was proposed in May, 1948, and accepted by the A.I. movement:—

> 'Operators of all artificial insemination centres should be asked to ensure that when selecting bulls the Bull Selection Panel shall include, by membership or co-option, a member of the Society competent to advise on the selection of bulls of that breed.'

"Apparently the Shorthorn Society did not accept it at once, for further discussion took place between the Society and the Ministry. In December, 1948, the Society notified its members and the Board that its A.I. rule requiring Society approval of A.I. bulls had been suspended. As a result the formula was 'released' to A.I. Committees, who since have shown a most businesslike approach to it; with the formula before them they have gone over the membership of their Bull selection Committees, in some cases deciding that they are in order and in one or two instances deciding to add to them by co-option. It should be remembered that there are Board A.I. Committees of several years' standing where the principle of selection of bulls by those who are elected by the users of the centre has worked extraordinarily well.

"(4) The case of a bull used, although 'disapproved' as the result of an inspection by a Shorthorn panel judge is mentioned; but if the A.I. movement has not recognised this form of 'approval,' how can there be disapproval? This case is so interesting and pertinent to the principle at stake that if the Shorthorn Society says the word we shall be only too pleased to put the full facts before your readers to let them judge the issue for themselves."

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NEW GRASSLAND RESEARCH STATION

A new Grassland Research Station for Great Britain under the administration of an independent Governing Body is being established by the Minister of Agriculture and the Secretary of State for Scotland in co-operation with the Agricultural Research Council. The new station will occupy an area of 500 acres at Hurley, Berkshire, adjoining the new Berkshire Farm Institute. Its work will be the investigation of problems relating to the sward and its production and maintenance under different conditions, but mainly under those of medium and low rainfall.

The existing Grassland Improvement Station at Drayton, Stratford-on-Avon, at present attached to the Ministry of Agriculture, will be transferred to the new Governing Body and its staff will form the nucleus of that for the joint enterprise. It is to be expected that within the next few years the work and the staff at Drayton will be transferred to the new Station at Hurley.

The work at Hurley will be carried out in close co-operation with that of the Welsh Plant Breeding Station at Aberystwyth, the Scottish Society for Research in Plant Breeding and other Research Institutions, and it will be under the scientific supervision of the Agricultural Research Council. Grant-aid will be given by the Ministry of Agriculture.

The new Governing Body is to be constituted as a company limited by guarantee and without share capital. The membership will provide a balanced representation of scientific knowledge and practical farming experience and is as follows:—Professor H. G. Sanders, M.A., PH.D. (chairman), Mr. Dennis Brown, Professor T. L. Bywater, B.SC., M.SC., Dr. John Hammond, D.SC., F.R.S., Professor Martin Jones, M.SC., Mr. T. E. Miln, Professor T. G. B. Osborn, M.A., D.SC., Mr. Maurice Passmore, Sir James Denby Roberts, BART., J.P., Mr. W. R. Trehande, Professor S. J. Watson, M.SC., D.SC., F.R.I.C., F.R.S.E., Capt. B. E. Rowley Williams and Dr. F. Yates, SC.D., F.R.S.

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R.S.M. DISCUSSION ON LEPTOSPIROSIS

We would draw the attention of our readers to the announcement in our Notices Column of the meeting of the Section of Comparative Medicine of the Royal Society of Medicine to be held at the Society's House, on Wednesday, April 13th, at 5 p.m. The subject to be discussed—Leptospirosis—is of considerable interest to both the veterinary and the medical professions and Dr. Borg-Petersen is a noted expert in this field. It is hoped, therefore, that there will be a large attendance.

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ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

SHEEP SCAB:

Cumberland.—Mireside Farm, Ennerdale, Cleator, Cumberland (Mar. 14th).

Lancs.—Saddler's Farm, Fence, Burnley, Lancs. (Mar. 16th).

Yorks, W.R.—Higher and Lower Calf Hall Farms, Barnoldswick, Colne, Lancs. (Mar. 14th).

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the N.V.M.A.

Correspondents are requested to write as briefly as possible.

SO-CALLED "HARD PAD DISEASE"

Sir,—Following Mr. A. Noel Ormrod's excellent communication in your issue of February 12th, 1949, and in order further to provoke discussion, I should like to add the following observations based on our experience in S. E. London, where the disease is widespread, almost endemic:—

(1) "Hard pad" is a most undesirable name to give this disease. It leads the public to consider that the hard pads are the chief or only symptom. This causes two difficulties:—

(*a*) Owners become panic-stricken when their dogs have any wounds or lesions of the feet, thinking the animal may have "hard pad." We have even had a cat presented to us with an interdigital dermatitis, with the anxious query as to whether it was "this new disease."

(*b*) Again, owners tend to watch for hardening of the pads to the exclusion of other general or nervous symptoms. This leads to delay in obtaining professional advice.

(2) Personally we consider that the first diagnostic symptom is an alteration in the dog's temperament, the quiet animal becoming excitable, the vicious friendly, and the affectionate snappy.

Sometimes hallucinations seem to occur, the animal staring fixedly in terror at objects with which he is normally quite familiar.

The affected animal is often very loath to submit to having his

head and face examined, and if not actually snappy, will toss the head and even bury the face in the paws, being, on the other hand, quite stoical about the examination of the rest of the body.

(3) In contrast to Mr. Ormrod's experience, we have seen cases in puppies of three to five months old, but in these patients, some cases occur in which the symptoms consist of a mucopurulent rhinitis and conjunctivitis with some gastric catarrh; these cases show no nervous or "hard pad" symptoms for upwards of a fortnight, in contrast to the average adult case, in which these occur in seven to 14 days. Diagnosis in such cases is not easy. When encephalitis eventually does occur, its manifestations are not as characteristic as in the acute adult cases.

(4) We have seen no cases in animals over nine years old; this seems to be the experience of others. Might this not be due to the fact that dogs whelped before the war did not have austerity-fed ancestors as have dogs under this critical age?

(5) The *sine qua non* of treatment appears to be absolute rest and quiet. The most modern therapeutic measures will not avail when the dog is being continually disturbed, even by the very administration of the treatment.

Yours faithfully,

6, Passey Place, Eltham, London, S.E.9. F. B. Halpin.

March 11th, 1949.

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PERSONNEL OF THE PROFESSION

Sir,—Having failed to make any impression on my colleagues when gathered in conclave and in order to allay my doubts, I feel impelled to address the following questions to the profession at large and by your aid, Sir, through the correspondence columns of the *Record*:

(1) Who or what is responsible for the remarkable increase in the numbers of veterinary undergraduates?

(2) Can the profession stand such a great increase in potential membership?

(3) Will our students be able to find jobs?

(4) Are we heading for a surplus and consequent unemployment?

(5) Veterinary work cannot be manufactured, so the available work must be shared. If the number who share be increased, will the recompense and incidentally, the standard of life of those who share be reduced?

These questions call urgently for an answer. If my doubts have no substance in fact I will be delighted. If the reverse should be the case, drastic action is necessary.

Yours faithfully,

Royal Veterinary College, Royal College Street, N.W.1. J. McCunn.

March 15th, 1949.

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NIGHT VETERINARY SERVICES IN THE METROPOLITAN AREA

Sir,—While sympathising with Mr. Hancock in principle upon the obligation of veterinary surgeons to be available to their clients at all times, I cannot help feeling that he is out of touch with the present position in small-animal practice in urban and suburban areas.

I would agree with Mr. Hancock that one owes service at all times to one's *clients*, but I am sure many of my colleagues in small-animal practice will agree with me that the proportion of out-of-hours calls one receives from clients is small, the vast majority of so-called emergency calls being, in fact, from "casual" people who do not employ a regular veterinary surgeon, and even more frequently from those people who normally make use of the animal welfare societies' clinics which close at a definite time, provide no emergency service and thus throw the onus of all evening and night work on the local private practitioner. Not once in a hundred times does the fact that a veterinary surgeon has given emergency service result in that person becoming a client; in other words, the private practitioner becomes a "convenience," a state of affairs I, for one, will not tolerate.

The general increase in lack of courtesy and consideration for others, which I think is admitted by everyone, has, during the last ten to 15 years, been particularly marked in suburbia, the result being that professional people, who can rightly be regarded as servants of the public, are now made the victims of what I can only describe as a public "abuse." This is very noticeable in the case of small-animal owners whose sense of responsibility has been decreased and false sentimentality increased, by the propaganda regarding animal welfare put out indiscriminately by certain charitable organisations. In addition, the increased number of people who are working during the day, has led to a frame of mind which expects service from veterinary surgeons at times when they themselves are not working, *viz.*, before 9 a.m. and after 7 p.m.; the curious part is that these same people do not expect the same service from public utilities such as food shops.

Mr. Hancock further criticises those practitioners who agreed to serve in the R.S.P.C.A. Night Service. He will not, I am sure, deny that I warned him on more than one occasion that if the administration of this scheme was not corrected in several vital particulars, it would fall into disrepute, which in fact has happened. May I recall to him that in the circular and questionnaire sent out by the R.S.P.C.A. we were asked to give the districts which we were prepared to cover; I interpreted this generously and took it that it would be a "gentleman's agreement" that we should be called only for these areas, yet in the several months my name was on the Night Service list, I did not receive one single call for my own area—to my mind an indication that my district was already receiving adequate out-of-hours attention—but I did receive several calls for districts not even remotely connected with my own and the climax came when I was requested to go to the other side of London at midnight on a Saturday to a dog which had been ill four days. I had already warned Mr. Hancock that if veterinary surgeons continued to receive calls to districts they could not reasonably be expected to serve and to cases which by no stretch of imagination could be called emergencies, the scheme would fail. I made constructive suggestions to remove these causes of criticism. The excuse put forward on four occasions was that the mistake was due to recent changes in night staff and their lack of familiarity with the duties. As a consequence of these events I resigned from that service. The solution seems to me to be for the R.S.P.C.A. to employ a full-time veterinary surgeon for night duty only, who can act in an ambulatory capacity, thus providing from its own funds the emergency service the public which supports them has a right to expect from animal welfare organisations.

It may be of interest to other practitioners to know that some years ago, being very worried over this identical problem, I consulted the late Dr. Bullock as to the ethical and moral responsibilities one should assume in connection with emergency work. He assured me very definitely that no practitioner need feel the slightest responsibility for emergency work arising in areas from which he did not normally obtain his living.

Yours faithfully,

78, Brentway, Church End, Finchley, N.3. Joan O. Joshua.

March 19th, 1949.

. . . . .

Sir,—The possible reason why the above service is failing to find sufficient active co-operation from the profession may be because of the slipshod way in which it is organised.

In common with a number of my colleagues I have no intention of sitting at home every evening on the off-chance of being sent for by the R.S.P.C.A. Many evenings I am out. If, however, I am at home, I never refuse such a call. It might be a good idea if the society were to organise a rota in each district, whereby one member was at home to receive such calls on one night each week and the list could be posted in the society's head office. This would ensure the necessary service.

Another point I would like to raise is the one of emergency. Someone at the head office could quite easily sort out the calls before dragging one of us from his bed to answer the telephone. The majority of the calls that I have received have been such that could easily be left until morning. There are also a number that should have been receiving attention for several days and it is only late at night, on Sunday or Bank Holiday, that the owner suddenly discovers the urgency for his animal to be seen by a veterinary surgeon. A classic example of the former is the woman who telephoned me one Boxing Day (the first one when I was in practice), refused to tell me what was wrong and insisted that I should go at once. The dog had been so neglected that several of its claws were growing into the pads of its feet and she required me to "cut the dog's nails."

I am sure if the society will make some effort (*a*) to establish a rota and (*b*) to sort out the urgency of night calls, the practitioners who have offered their services will co-operate to make the London Night Service worthy of the profession.

Yours faithfully,

8, Abingdon Villas, Kensington, W.8. L. R. Geffen.

March 19th, 1949.